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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,727	12/21/2001	Chenghua Oliver Han	22.1450	9783

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SCHLUMBERGER TECHNOLOGY CORPORATION
14910 Airline Road
P.O. Box 1590
Rosharon, TX 77583-1590

EXAMINER

JOHNSON, STEPHEN

ART UNIT	PAPER NUMBER
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3641

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/027,727	Applicant(s) HAN, CHENGHUA OLIVER	
	Examiner Stephen M. Johnson	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,7,17-19,23,25,28,30,33,35 and 42-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,7,17-19,23,25,28,30,33,35 and 42-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following Office action is in response to the RCE as filed on 2/6/2009. Claims 1, 6-7, 17-19, 23, 25, 28, 30, 33, 35, and 42-45 remain active in the case. Claims 2-5, 8-16, 20-22, 24, 26-27, 29, 31-32, 34, and 36-41 have been cancelled.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 7, 23, 25, 33, 35, 42-43, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Frye et al. (041).

Frye et al. (041) disclose a perforating system comprising:

- | | |
|--|----------------------|
| a) a charge case of a shaped charge; | 16, 10 |
| b) an explosive in the charge case; | 14 |
| c) a liner in the charge case; and | 12 |
| d) an axially oriented slot in the wall. | [26, 30] or 32 or 34 |

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-19, 28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frye et al. (041) in view of Turechek (857).

Frye et al. (041) apply as previously recited. However, undisclosed is a perforating gun string including a loading tube and associated shaped charge carrier. Turechek (857)

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teach a perforating gun string that includes a loading tube and associated shaped charge carrier (6, 15). Applicant is selecting a well known usage for shaped charges and putting them to use as they are commonly known in this art with expected or predictable results.

It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Turechek to the Frye et al. shaped charge assembly and have a shaped charge assembly with associated loading tube and shaped charge carrier.

6. Claims 6 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frye et al. (041) in view of Chawla et al. (008).

Frye et al. (041) apply as previously recited. However, undisclosed is a recessed fracture region that is a v-shaped cut. Chawla et al. (008) teach a recessed fracture region that is a v-shaped cut 46. Applicant is substituting one type of recessed fracture region for another in an analogous art setting with expected or predictable results. It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Chawla et al. to the Frye et al. perforating system and have a perforating system with a differently shaped recessed fracture region.

7. Claims 1, 7, 23, 25, 33, 35, 42-43, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Willow (505).

Willow (505) disclose a perforating system comprising:

- | | |
|--|------------------|
| a) a charge case of a shaped charge; | 12 |
| b) an explosive in the charge case; | 27 |
| c) a liner in the charge case; and | [26] or [16, 26] |
| d) an axially oriented slot in the wall. | 21 |

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8. Claims 6 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willow (505) in view of Chawla et al. (008).

Willow (505) applies as previously recited. However, undisclosed is a recessed fracture region that is a v-shaped cut. Chawla et al. (008) teach a recessed fracture region that is a v-shaped cut 46. Applicant is substituting one type of recessed fracture region for another in an analogous art setting with expected or predictable results. It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Chawla et al. to the Willow perforating system and have a perforating system with a differently shaped recessed fracture region.

9. Applicant's arguments with respect to claims 1, 6-7, 17-19, 23, 25, 28, 30, 35, and 42-45 have been considered but are moot in view of the new ground(s) of rejection.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877 and whose e-mail address is (Stephen.Johnson@uspto.gov). The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The Central FAX phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.

/Stephen M. Johnson/
Primary Examiner, Art Unit 3641

SMJ
August 10, 2009